

**Abstract**

The invention is embodied in the form of a flight simulator in the conditions of vortex danger and in conditions when a pilot is informed about the possibility to penetrate into said dangerous area of vortex sheddings produced by a vortex generator. The inventive simulator is embodied in the form of modular variants and comprises a module (9) for imitating vortex conditions for determining the trajectory and intensity of the vortex sheddings of vortex generators as the population of vorticity areas, a module (10) for imitating the action of vortex disturbances on an aircraft and for determining additional forces and torques induced by the vortex sheddings of vortex generators, a module (17) for the parameters of the dangerous area of the vortex disturbances, a warning module for calculating the vortex disturbances danger on a modulated control plane located in front of the aircraft at an anticipated distance therefrom equal to a distance which is covered by the aircraft during a selected forecast time and is sufficient for carrying out a flight manoeuvre by the aircraft in order to move away from the dangerous trailing vortex area.